

REMARKS

Favorable reconsideration and withdrawal of the objection and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Drawings

Figure 4 of the drawings has been further amended to show the inclusion of a charge elimination member in an image forming apparatus which is background art for the present invention. Since the charge eliminating member is a claimed feature of the invention, the legend "BACKGROUND ART" has been deleted. It is respectfully submitted that no new matter has been added.

Specification

The specification has been amended to conform more closely to the claims herein. It is also respectfully submitted that no new matter has been added.

Claims Status

Claims 1, 6, 7, 14, and 15 remain pending in the application. Claims 8, 16 and 17 have been canceled. Claims 6, 7, 14, and 15 have been amended to even more succinctly define the invention and/or to improve their form. It is respectfully submitted that no new matter has been added. Claims 1 and 14 are the only independent claims pending in the application.

Claim Objection

Claim 15 is objected to for the reasons succinctly set forth in the Official Action. Claim 15 has been amended *inter alia* to avoid the grounds of the rejection. It is respectfully submitted that the objection has been overcome.

Art Rejections

Claims 1 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rimai, et al. in view of Watanabe, et al.

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Rimai, et al. in view of Watanabe, et al. as applied to Claims 1 and 7 and further in view of Tarnawskyj, et al.

Claims 1, 6 through 8, 14, and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hara, et al. in view of Hosoya, et al. and further in view of Tarnawskyj, et al.

Claim 16 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hara, et al. in view of Hosoya, et al.

Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hara, et al. in view of Hosoya, et al. as applied to Claim 16 and further in view of Tarnawskyj, et al.

The rationale underlying each of the foregoing art rejections is succinctly set forth in the Official Action.

Response to Art Rejections

As above indicated, Claims 8, 16 and 17 have been canceled herein. Accordingly, the rejection is moot and further comment on the rejection of these claims is not necessary.

The rejections of the pending claims are respectfully traversed.

Claim 1 calls for an image forming apparatus including an image bearing member bearing a toner image thereon; and an intermediate transfer member contacting with the image bearing member in a contact portion. The toner image on the image bearing member is transferred to transfer medium by the intermediate transfer member, a Young's modulus of the image bearing member is equal to or greater than $2 \times 10^8 \text{ N/m}^2$ and equal to or less than $9 \times 10^9 \text{ N/m}^2$, and a contact pressure between the image bearing member and the intermediate transfer member in the contact portion is equal to or greater than $4.0 \times 10^4 \text{ N/m}^2$ and equal to or less than $7.3 \times 10^4 \text{ N/m}^2$.

With regard to the rejection to Claim 1, the Examiner asserts that the range of Young's modulus of the image bearing member in Claim 1 is in the range described in line 23 of column 4 of Rimai. However, the range of Rimai is greater than 10GPa and preferably is greater than 100GPa. In contrast, the range recited in Claim 1 is equal to or greater than $2 \times 10^8 \text{ N/m}^2$ and equal to or less than $9 \times 10^9 \text{ N/m}^2$. The maximum value of the present invention, $9 \times 10^9 \text{ N/m}^2$, is less than the minimum value of that of Rimai, i.e., 10GPa ($1 \times 10^{10} \text{ N/m}^2$) since 1G implies 10^9 . Accordingly, Rimai does not disclose or suggest the range of Young's modulus of the image bearing member recited in Claim 1.

In addition, as noted by the Examiner, Rimai does not teach a photoconductive primary image member being in contact with the intermediate transfer drum within a pressure range limitation of $4.0 \times 10^4 \text{ N/m}^2$ and $7.3 \times 10^4 \text{ N/m}^2$. The Examiner relies on

Watanabe for allegedly disclosing this feature.

The Examiner asserts that Watanabe teaches a photoconductive primary image member within the pressure range recited in Claim 1. However, the contact pressure $9.8 \times 10^4 \text{ N/m}^2$ disclosed in Watanabe is outside of the claimed range of $4.0 \times 10^4 \text{ N/m}^2$ to $7.3 \times 10^4 \text{ N/m}^2$.

Therefore, Rimai and Watanabe, whether taken individually or in combination, fail to disclose or suggest the claimed ranges of Young's modulus of the image bearing member and the claimed range of a contact pressure between an image bearing member and an intermediate transferring member.

The Examiner asserts that Rimai and Watanabe do not teach a photoconductive drum having the claimed range of surface resistivity recited in dependent Claim 6 and relies on Tarnawskyi et al. for allegedly teaching the feature. However, Tarnawskyi et al. does not disclose or suggest the claimed Young's modulus and the claimed contact pressure between an intermediate transferring member and an image bearing member.

Hara et al. discloses a Young's modulus in connection with a semi-conductive belt. Hara et al. also does not disclose a contact pressure between an image bearing member and an intermediate transferring member.

Hosoya et al. discloses a contact pressure between a pressure roller and a backup roller. However, Hosoya et al. does not disclose or suggest a contact pressure between an image bearing member and an intermediate transferring member.

It is respectfully submitted that Claim 1 is patentably distinguishable over Tarnawskyi et al., Hara et al., Hosoya et al., and Tarnawskyi et al., whether taken individually or in combination.

Independent Claim 14 calls for an image forming apparatus comprising: an image bearing member for bearing a toner image; an intermediate transfer member which is movable in a moving direction and contacts said image bearing member at a contact portion; and a cleaning member opposed to said movable intermediate transfer member, for cleaning toner on said intermediate transfer member.

Claim 14 also features a charge elimination member positioned upstream of the contact portion and downstream of said cleaning member in the moving direction of the intermediate transfer member, for executing a charge elimination of said intermediate transfer member, image on the image bearing member is transferred to a transfer material by said intermediate transfer member, surface resistivity of said image bearing member is equal to or greater than $1 \times 10^{15} \Omega\Box$, and a contact pressure between said image bearing member and said intermediate transfer member at the contact portion is equal to or greater than $2.7 \times 10^4 \text{ N/m}^2$ and equal to or less than $7.3 \times 10^4 \text{ N/m}^2$. By the virtue of the present invention, it achieves the charge elimination of the intermediate transferring member without keeping a time until a charge on an intermediate transferring member attenuates since excessive charge caused by a surface resistivity greater than $1 \times 10^{15} \Omega\Box$ can be eliminated by the charge elimination member. Furthermore, in order to prevent from unevenness of charge elimination caused by the charge elimination in the condition that a transferring residual toner still remains, the charge elimination member is downstream of said cleaning member in the moving direction of the intermediate transfer member.

In contrast, Hara et al. discloses that a bias roller (26) transfers toner on a semi-conductive belt onto a sheet of paper P. Hara et al. does not disclose or suggest that a bias roller (26) eliminates a transfer belt (24). In addition, Hara et al. does not disclose or

suggest a charge elimination member positioned downstream of the cleaning member in the moving direction of the intermediate transfer member, for executing a charge elimination of the intermediate transfer member. Further, Hara et al. does not disclose or suggest that a charge elimination member is positioned upstream of the contact portion. Even though a charge elimination member is positioned at a bias roller (26) in Hara, it cannot achieve a uniform charge elimination since toner is not removed upstream of the contact portion.

Hosoya et al. and Tarnawskyi et al. also fail to disclose a charge elimination member positioned upstream of the contact portion and downstream of the cleaning member in the moving direction of the intermediate transfer member, for executing a charge elimination of the intermediate transfer member.

It is respectfully submitted that Claim 14 is patentable over Hara et al., Hosoya et al., and Tarnawskyi et al., whether taken individually or in combination.

It is also respectfully submitted that the combination rejections are not well founded. The Examiner has provided a *rationalization* for combining the teachings of the cited art based on the benefits of doing so. A combination rejection is proper only when there is some suggestion or motivation in the cited art *per se* to cause one having ordinary skill in the art to combine the teachings of the cited art. There is nothing in the cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestions in the art that such a combination is desirable. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

In view of the foregoing, it is respectfully submitted that independent Claims 1 and 14 are allowable over the cited art whether taken individually or in combination.

Dependent Claims

Claims 6, 7 and 15 depend either directly from one of Claims 1 or 14 and are allowable by virtue of their dependency and in their own right for further defining Applicants' invention. Individual consideration of the dependent claims is respectfully requested.

Closing Comments

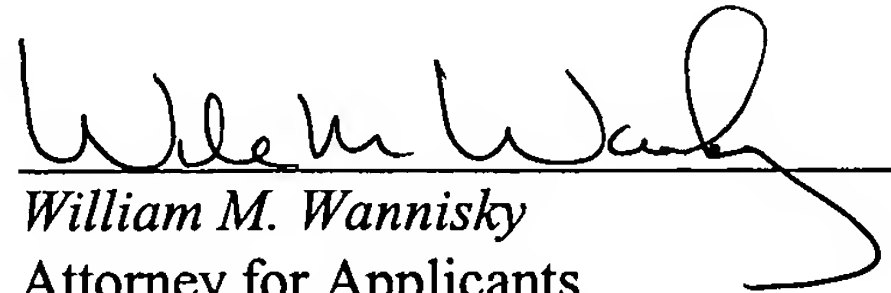
It is respectfully submitted that the pending claims are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

This Amendment could not have been presented earlier in the prosecution, inasmuch as it was earnestly believed that the claims heretofore on file were in condition for allowance. No new claims have been submitted. It is believed that the Examiner's familiarity with the present application will allow full consideration hereof without the expenditure of undue time and effort.

Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'William M. Wannisky', written over a horizontal line.

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